CATALOG C49

HARGRAVE
Tested Tools

THE CINCINNATI TOOL COMPANY

CLAMPS

FOREWORD

Facts to Remember...

For more than 70 years The Cincinnati Tool Company has manufactured mechanics' hand tools.

The trade-mark, **HARGRAVE**, on Clamps, Chisels, Punches, Star Drills, Washer Cutters and the various other tools which we manufacture, marks the highest standards of design, material and workmanship.

Our sales policy is to sell to the Wholesale Hardware and Industrial Supply houses in stock quantities. This policy results in the lowest possible cost to the consumer for our products. It also enables us to give splendid service.

Our selling terms are always based on delivering goods f.o.b. cars, our factory. We make no secret rebates or preferential prices.

Sales helps are part of our service. Jobbers may have copies of these catalog pages of standard catalog size, also attractive descriptive matter, for distribution, of items which they carry in stock. We furnish electros of usual sizes upon request. Our salesmen are ready to aid jobbers' salesmen on difficult sales where specialized experience will help.

Cooperation is a very elastic term. We practice it by trying to increase our business thru our good wholesale customers. We ask in return that distributors justify our confidence by carrying a reasonable stock—drop shipments must be made at times, but don't overdo it. Goods are packaged to suit average minimum stock. An extra charge is made for broken packages. Our stock enables us to ship most orders within one day from receipt.

All our materials and finished goods are carefully tested and inspected. (See pages 4 and 22.) If goods fail in service, we wish to learn the cause of the failure, and if we are to blame for it, we make replacement. Please do not return goods to us without our permission.

Shipping facilities here are excellent. We are located in Norwood, a suburb of Cincinnati, with our switch on the Pennsylvania R. R. lines. We are near the Baltimore and Ohio R. R. and the Norfolk and Western R. R. Also in reach of New York Central R. R. lines, Chesapeake and Ohio R. R., Southern R. R., Louisville & Nashville R. R., Erie R. R., and a variety of motor truck lines.

Prices shown in this catalog are list. Discounts gladly furnished upon request.

HARGRAVE

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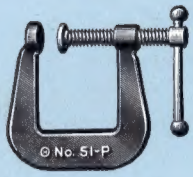
THE CINCINNATI TOOL COMPANY

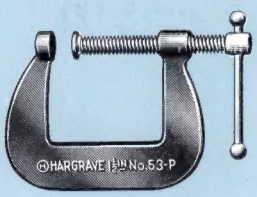
Super-Junior Clamps



Forged Steel—Heat Treated

This new line is the answer to a growing need for MORE STRENGTH, LONGER LIFE and greater value for the money invested. They are rapidly becoming the favorite clamps of industrial users everywhere.

Forged steel, heat-treated frames make SUPER-JUNIOR Clamps much stronger than pressed steel clamps, malleable, aluminum and other cast clamps on the market. They are much more economical to use on practically all classes of work.



Seven Convenient Sizes

Especially suitable for jig and pattern work, gluing, welding and aircraft construction. Specify SUPER-JUNIOR Clamps and eliminate the loss of valuable shop time due to small clamp failure. "They're built to take it!"

More Strength

Longer Life

Fewer Repairs

Number	50	51	52	53
Opening, inches	**1**	**1**	**1¼**	**1½**
Depth, inches	¾	1½	1¼	1½
List, dozen	**$4.70**	**$4.90**	**$5.10**	**$5.50**
Quantity in box, dozen	1	1	1	1
Approx. weight of box, lbs.	1	2¼	2½	3½

Number	54	55	56
Opening, inches	**2**	**3**	**2½**
Depth, inches	1¼	1⅜	2½
List, dozen	**$6.70**	**$8.70**	**$10.60**
Quantity in box, dozen	½	½	½
Approx. weight of box, lbs.	2	3¼	4

Please order in PACKAGE quantities

FLAT WING HANDLE FURNISHED WHEN REQUIRED

Liberal discount from all List Prices

HARGRAVE
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Small "C" Clamps

Strong Malleable Frames and Steel Screws

Used extensively in AIRCRAFT and many other industrial plants. With flat Wing and Riveted Button Tip. Natural Finish.

Number	566	568
Opening, inches	1¼	2½
Depth, inches	1¼	2½
List, dozen	$5.40	$10.00
Quantity in box, dozen	6	2
Weight, per dozen, lbs.	2½	9¼

Depth given for all Hargrave Clamps is distance from center of screw to frame or bar

Junior Clamps

Strong Malleable Frames and Steel Screws

Designed especially for model and pattern making and other light clamping operations. Malleable frames are finished in bright, baked-on red enamel.

Number	555	556
Opening, inches	1½	2½
Depth, inches	3½	4½
List, dozen	$11.00	$16.00
Quantity in box, dozen	½	½
Approx. weight, per dozen, lbs.	6½	16

Number	551	552
Opening, inches	4	6
Depth, inches	1⅝	1⅞
List, dozen	$14.00	$19.00
Quantity in box, dozen	½	½
Approx. weight, per dozen, lbs.	10½	16

Liberal discount from all List Prices

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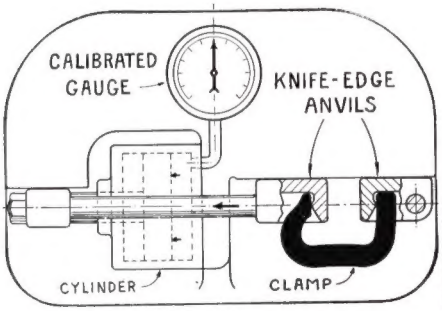
Each Clamp must pass a rigid production test

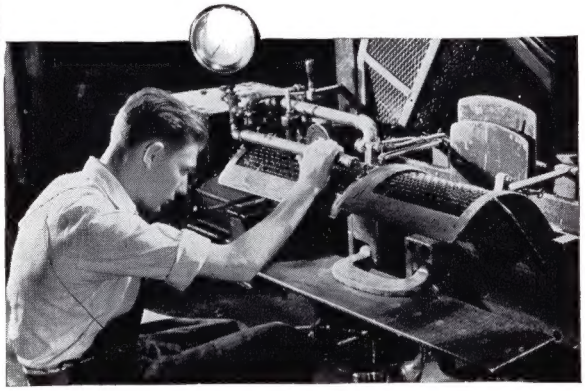
Hargrave "C" Clamps with the exception of Junior and Super-Junior patterns are individually tested on automatic power testing machines. This avoids the possibility of defective clamps reaching the user.

AUTOMATIC POWER TESTING MACHINE

Illustrated below is one of our testing machines which applies loads to 30,000 lbs. (15 tons). This hydraulic unit is used for production testing and is also useful in experimental work and in making comparative tests.



As hydraulic pressure is applied the knife-edge anvil on left exerts pressure on foot of clamp as does the screw of the clamp in actual operation.



The following list of test loads applied to six patterns of Hargrave "C" Clamps in the 6″ size clearly shows the necessity of carefully selecting the right clamp best suited to do the job at hand.

No. 552—6	**in.** Junior Clamp, lbs	**700**
No. 603—6	**in.** Body Clamp, lbs	**1,800**
No. 540—6	**in.** Standard Carriage Clamp, lbs	**2,300**
No. 44—6	**in.** Forged Steel Superclamp, lbs	**4,000**
No. 42—6	**in.** Forged Steel Superclamp, lbs	**9,800**
No. 40—6½	**in.** Forged Steel Superclamp, lbs	**24,100**

Important—The Test load for each clamp is merely the number of pounds stress required to locate any defect. Actually each clamp will stand a greater load.

Suggestions for the Care and Use of Hargrave Clamps

1. Handle your clamps with a reasonable amount of care. Rough handling can damage a clamp just as it can any other tool.

2. Keep your clamps clean and occasionally lubricate lightly all moving parts. This will make them last longer and work more smoothly. After oiling be sure there is no oil on any parts that will come in contact with the work.

3. Use clamps of the proper capacity for the job. Do not use a large "C" clamp on thin stock. Do not use a light service clamp on heavy work.

4. Keep your clamps in convenient racks when not in use, rather than throwing them in a pile. This will protect them from damage and make them readily accessible when you need them.

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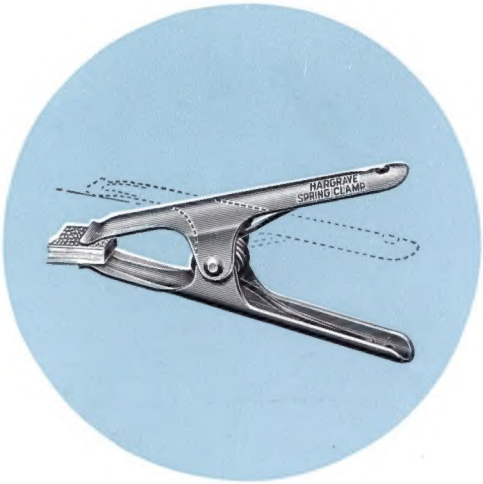
Improved Spring Clamp

The Improved Spring Clamp is popular because it can be applied and removed quicker than any other type of Clamp. Surface of the work being clamped is always tangent to curve of jaw at any opening (see dotted line). This enables the Clamp to hold firmly instead of slipping off the work, even when opened to full capacity. It is not affected by vibration. Shape of the jaw also prevents scratching or marring of the work.



Made of heavy gage steel, jaws are cadmium plated and shaped to give a good hand grip. Spring is high-grade tempered steel which does not weaken from use. Rivet is large in diameter. All parts are accurately fitted, insuring long and satisfactory service.

Available in three sizes

	Opening Inches	List, Dozen	Length, Inches	Weight, Dozen
No. 1	1	**$ 5.40**	4	1 lb. 9 oz.
No. 2	2	**6.70**	6	4 lbs., 5 oz.
No. 3	3	**13.40**	9	8 lbs., 8 oz.

Nos. 1 and 2 are packed 1 dozen in a box.
No. 3 are packed ½-dozen in a box.

Used by—

AIRCRAFT BUILDERS
AUTO BODY WORKERS
BOOKBINDERS
CABINET MAKERS
CLOTH CUTTERS
HOMECRAFTERS
LEATHER WORKERS
PATTERN MAKERS
SHEET METAL WORKERS
TRUNK MAKERS
UPHOLSTERERS
WELDERS

NOTE—Spring Clamps can be furnished with rubber tips.
Write us for prices.

Adjustable Pressure Spring Clamp

PATENT APPLIED FOR

Slip joint arrangement on this Spring Clamp gives it two adjustments making it adaptable to work requiring either light or heavy pressure.

	Opening Inches	List, Dozen	Jaw Pressure, Open Adjustment	Jaw Pressure, Closed Adjustment
No. 2V	2	**$11.00**	32 lbs.	46 lbs.
No. 3V	3	**19.00**	62 lbs.	83 lbs.

Packages and weights are same as No. 2 and No. 3 above.)

Liberal Discount from all List Prices

HARGRAVE
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No. 530 Assortment

Attractive Display Stand Given with Purchase of One and 1/2-Dozen Popular Sizes of No. 540 Carriage Clamps

Substantially constructed to look its best and to sell all sizes and patterns of Clamps for years to come. Compactly designed to take up the minimum of counter space, it measures 12″ x 5″ x 6″ without Clamps. Within a few seconds Clamps can be mounted on shelf of display and it goes right to work. Space for pricing is provided on back.

No. 530 Clamp Assortment is a small assortment of popular sizes for dealers consisting of ½-dozen each 3″—4″ and 6″ No. 540 Carriage Clamps—the ideal Clamps for hobbyists, home workshop owners, boat builders and handymen. The frames of these clamps are more than 50% stronger than malleable or grey iron clamps. Screw is steel, heat-treated to prevent bending and battered threads. Tip is steel, oscillating type, put on to stay.

Assortment Includes . . .

½-Dozen . . . . . **3″** No. **540** Carriage Clamps
½-Dozen . . . . . **4″** No. **540** Carriage Clamps
½-Dozen . . . . . **6″** No. **540** Carriage Clamps

At Regular Price (No Charge for Display Stand)

PACKAGED—One to a carton.
CARTON—12½″ x 10½″ x 10½″.
WEIGHT—40 lbs.

List, each
No. 530 Assortment $30.35

★SEE OPPOSITE PAGE FOR COMPLETE CARRIAGE CLAMP INFORMATION

Standard Carriage Clamp - No. 540

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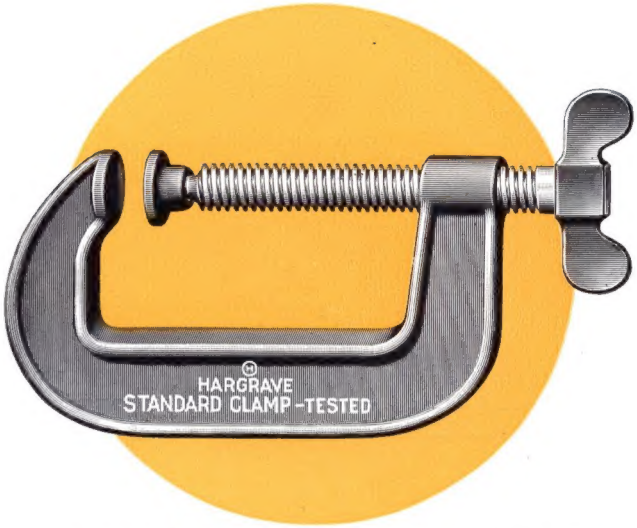
Each Clamp is Power Tested

The Standard Clamp is preferred by the larger users of such tools, because of its superior design and construction.

The Power test given each Hargrave Carriage Clamp on our Hydraulic Testing Machine assures satisfaction to the user and repeat orders for the distributor.

No. 540 is the only Carriage Clamp having a forged steel wing and heat-treated screw.



Important: The frame of the popular sizes of No. 540 Standard Carriage Clamp (3" to 8", inc.), is made by a special process which gives it far greater strength than even the best grades of malleable. The 10", 12" and 14" sizes have high-grade malleable frames as they cannot be manufactured by the same process as the smaller sizes.

FRAME—Shaped to give greatest strength for the weight. Each one individually tested to more than its rated load on our hydraulic power testing machine.

SCREW—Improved single Acme thread gives more power in tightening. It is heat-treated to prevent bending, breaking or marring of the threads. Wing is forged integral.

TIP—Put on to stay. Steel, oscillating type which gives much longer service than the malleable iron tips ordinarily used.

No. 540 Standard Carriage Clamps

Opening, Inches	List Price, Dozen	Depth from Center of Screw, Inches	Quantity in Carton	Approx. Weight of Carton
3	**$15.20**	1⅞	3 dozen (6 boxes)	38 lbs.
4	**18.20**	2 1/16	3 dozen (6 boxes)	66 lbs.
5	**22.70**	2½	2 dozen (4 boxes)	55 lbs.
6	**27.30**	2¾	2 dozen (4 boxes)	65 lbs.
8	**41.60**	3¼	1 dozen	50 lbs.
10	**53.40**	3⅝	½ dozen	40 lbs.
12	**69.60**	3⅝	½ dozen	48 lbs.
14	**99.80**	3¾	½ dozen	54 lbs.

Sizes, 3 to 6 inches, are packed one-half dozen to a box. These sizes are shipped in cartons as are also the 8 to 12-inch. See listing of quantities above. PLEASE ORDER IN PACKAGE QUANTITIES.

Liberal Discount from all List Prices

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Welders' Clamps (Forged Steel)

(PATENTED)

EACH CLAMP IS POWER TESTED

SOLID ALLOY SPATTER RESISTING SCREWS

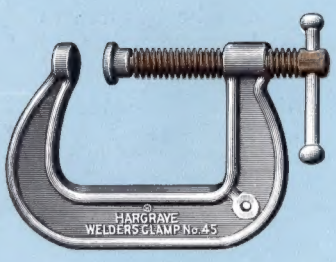
The screws of Hargrave Welders' Clamps are made of a special alloy (solid, not plated or coated) that permanently resists spatter. They are large in diameter to prevent bending or breaking. Oscillating ball and socket tip is steel and it is put on to stay.

Frames are forged steel, heat-treated to give greatest strength for the weight. Each Welders' Clamp frame is drilled for ground cable. Test loads are given in specifications so that proper clamp can be selected for the job.

No. 41 REGULAR SERVICE

Opening, inches	**2**	**3**	**4**	**6**
Depth Throat, inches	1¾	2¼	2½	2¾
Diameter Screw, inches	½	⅝	⅝	¾
Weight, lbs., each	⅞	1¾	2¼	3⅝
Test Load, lbs.	2200	2400	3000	3700
List Price, each	**$3.00**	**$3.40**	**$4.00**	**$5.00**

PACKAGED—ONE TO A BOX



No. 45 DEEP REACH

Opening, inches	**2**	**3**	**4**
Depth, inches	2	3	4
Diameter of Screw, inches	½	⅝	⅝
Weight, lbs., each	1⅛	2¼	3
Test Load, lbs.	2300	2500	3200
List Price, each	**$4.00**	**$5.00**	**$6.00**

PACKAGED—ONE TO A BOX

No. 43 HEAVY SERVICE

Maximum opening, inches	**4**	**6**	**8**	**10**	**12**
Minimum opening, inches	0	0	2	3	5
Depth Throat, inches	2½	2¾	2¾	3	3
Diameter Screw, inches	⅞	⅞	1	1⅛	1⅛
Weight, each, lbs.	4¾	6⅛	7⅛	10¼	11
Test Load, lbs.	8800	9800	11000	12100	13200
List Price, each	**$7.00**	**$8.40**	**$9.40**	**$12.00**	**$14.00**

PACKED IN BULK

Liberal Discount from all List Prices

HARGRAVE
Tested Tools
THE CINCINNATI TOOL COMPANY

Forged Steel Superclamps

PATENTED

EACH CLAMP IS POWER TESTED

Frames are forged by our patented process from an extremely stiff steel, and are heat-treated. The screws are hardened steel to prevent bending and battered threads and are large in diameter.

Each Superclamp is tested on our Power Driven Hydraulic Testing Machine before it goes into stock. Test load for each clamp given below is merely the number of pounds strain to which it has been tested. Each clamp will actually stand more strain than the figure given.

No. 35—OVERLAP SERVICE

Wing is large and is forged integral with screw. Either Swivel Lever or Pin Handle can be furnished special instead of the regular wing. Clamps with wing furnished from stock.

Opening, in.	**2**	**3**	**4**	**6**
Depth, in.	1¾	2¼	2½	2¾
List, dozen	**$18.00**	**$20.00**	**$24.00**	**$28.00**
Test load, lbs	2400	2600	3300	4000
Weight, lbs., doz	12	19	27	40

Opening, in.	**8**	**10**	**12**
Depth, in	3½	3½	3½
List, dozen	**$40.00**	**$56.00**	**$68.00**
Test load, lbs.	4900	5900	8300
Weight, lbs., doz	65	92	106

2 in. to 6 in. incl. packed 1/2 doz. to a box. 8 in. to 12 in. packed in bulk.

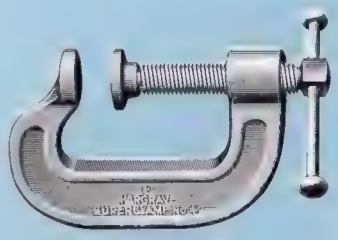
Full length screws on all sizes. Acme thread; oscillating (ball and socket) tip is steel—put on to stay.

No. 45—MEDIUM SERVICE

Maximum opening, in.	**4**	**6**	**8**	**10**
Minimum opening, in	⅝	2⅝	4 11/16	6 11/16
Depth of Throat, in.	2½	2¾	2¾	3
Diameter of Screw, in	¾	¾	¾	¾
Weight, each, lbs	4½	5½	6¼	8½
Test Load, lbs	8,800	9,800	11,000	12,100
List Price, each	**$5.20**	**$6.40**	**$7.50**	**$8.60**

Maximum opening, in.	**12**	**15**	**18**
Minimum opening, in	8 11/16	10	13
Depth of Throat, in.	3	3¼	3¼
Diameter of Screw, in	⅞	⅞	⅞
Weight, each, lbs.	9	13½	15
Test Load, lbs	13,200	14,200	15,400
List Price, each	**$10.00**	**$12.70**	**$16.20**

Packed in bulk



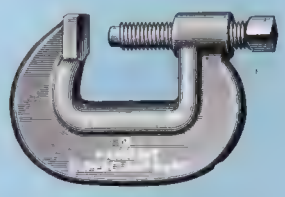
Sliding Pin (vise type) Handle; N. S. C. thread; oscillating (ball and socket) tip is steel—put on to stay.

No. 40—SHORT SERVICE

Maximum opening, in.	¾	**1¼**	**1¾**	**2¼**
Minimum opening, in	0	0	¾	⅞
Depth of Throat, in.	11/16	1⅛	1 9/16	1⅞
Diameter of Screw, in	⅜	⅜	½	⅝
Weight, each, lbs.	⅓	¾	1⅝	3½
Test Load, lbs	2,200	4,900	7,600	11,000
List Price, each	**$1.65**	**$2.50**	**$4.20**	**$5.80**
List, Reg. Screw only	.40	.48	.55	.95
List, Full Length Screw	.40	.48	.65	1.15

Maximum opening, in.	**3¼**	**4½**	**5½**	**6½**
Minimum opening, in	1⅜	2	2½	3⅛
Depth of Throat, in.	2½	2¾	3¼	3¼
Diameter of Screw, in	⅞	⅞	⅞	1
Weight, each, lbs.	6¼	9½	12⅓	15⅙
Test Load, lbs	14,200	17,500	20,900	24,100
List Price, each	**$8.40**	**$10.80**	**$13.40**	**$16.60**
List, Reg. Screw only	1.75	1.90	2.00	2.55
List, Full Length Screw	2.20	2.65	3.30	3.90

Packed in bulk



Full length screws furnished when required.

Liberal Discount from all List Prices

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Deep Clamps "C" Clamp Style

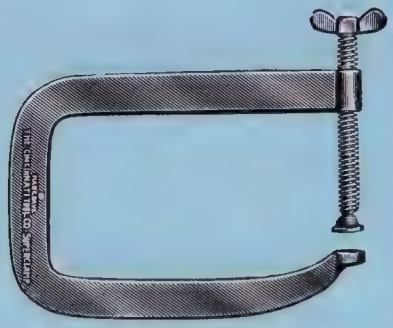
EACH CLAMP IS POWER TESTED

No. 573—DEEP CLAMP

A medium weight clamp similar to the Standard Carriage Clamp, but with a deeper reach. Frame is malleable. Steel Screw is ⅝-inch diameter, heat-treated, with forged wing and oscillating ball and socket steel tip.

Opening, inches	**3½**	**4½**	**6½**
Depth, inches	4½	4½	4½
List, dozen	**$33.00**	**$36.00**	**$45.00**
Weight, dozen, lbs.	27¾	32¼	37¼

PACKED IN BULK



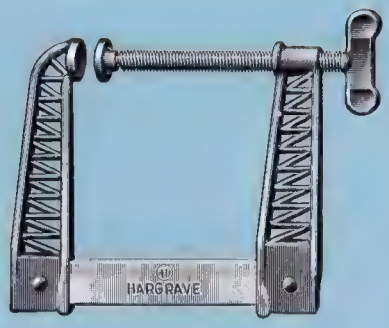
No. 44X—DEEP REACH SUPERCLAMP

Forged Steel Frame of No. 44X makes it an excellent clamp for deep reach, medium to heavy service, clamping operations. When a stronger, more rigid clamp is required, specify No. 574 shown below.

Size, inches	**6x8**	**8x12**	**12x16**
Opening, inches	6	8	12
Depth, inches	8	12	16
List Price, each	**$6.00**	**$10.00**	**$15.00**
Approximate Weight, lbs., each	7	13	19
Size of Steel, inches	½x1½	½x2	½x2
Diameter of Screw, inches	⅝	¾	⅞

PACKED IN BULK

Prices for special sizes are furnished on request.



Where depth is specified in listings it is distance from center of screw to frame or bar

No. 574—RIGID DEEP CLAMP

Especially designed for heavy duty work when an extremely stiff clamp is required. Strong reinforced malleable uprights are securely riveted to high carbon steel bar measuring ½" x 2". Full length steel screws are ⅞" dia., heat-treated to prevent bending and battering of threads. Oscillating ball and socket tip is steel—put on to stay.

Size, inches	**6x9**	**8x9**	**12x9**	**16x9**
Opening, inches	6	8	12	16
Depth, inches	9	9	9	9
List Price, each	**$7.00**	**$9.00**	**$11.00**	**$13.00**
Approximate Weight, lbs., each	15	15½	16½	18
Diameter of Screw, inches	⅞"	⅞"	⅞"	⅞"

Ask for prices on special sizes.

Liberal Discount from List Prices

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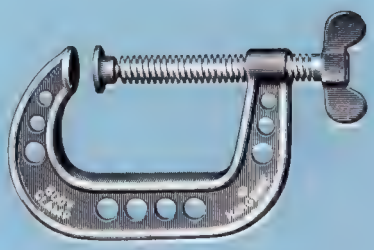
THE CINCINNATI TOOL COMPANY

Body Clamp No. 603

Malleable frame is deep and very strong. Metal is distributed for maximum strength without excessive weight. Screw is steel, heat-treated to prevent bending and battering of threads. Furnished with steel oscillating ball and socket tip, forged wing.



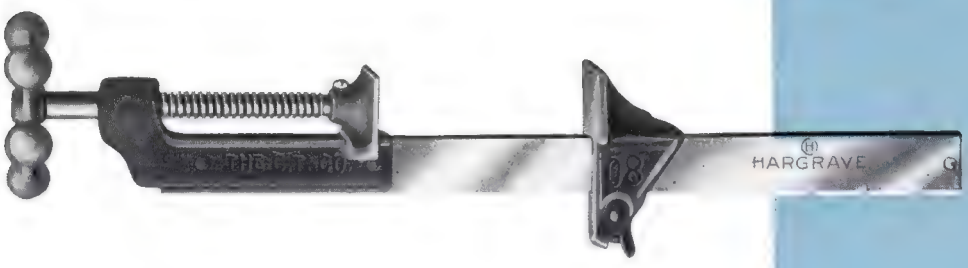
Opening, inches	**3**	**4**	**5**	**6**
Depth, inches	2¼	2½	3	3 5/16
List, dozen	**$19.00**	**$23.00**	**$28.00**	**$34.00**
Weight, lbs., dozen	18½	28	34½	41¼

Opening, inches	**8**	**10**	**12**
Depth, inches	3¾	4	4¼
List, dozen	**$51.00**	**$64.00**	**$77.00**
Weight, lbs., dozen	62	84	101¼

Packed in Bulk

Clamp depth specified in listings is measurement from center of screw to frame or bar

Joiner's Clamp No. 458



This Clamp is intended for narrow gluing and clamping where speed and rapidity of handling are more necessary than power. It has high carbon steel bar 3/16 x 1⅛-inch; ½-inch, heat treated, steel screw with "Acme" thread; malleable iron frame, tip, slide and wheel; steel dog, quickly adjusted; strong, light, durable. Clamping surfaces are 1¼ inches deep and 1⅜ inches wide.

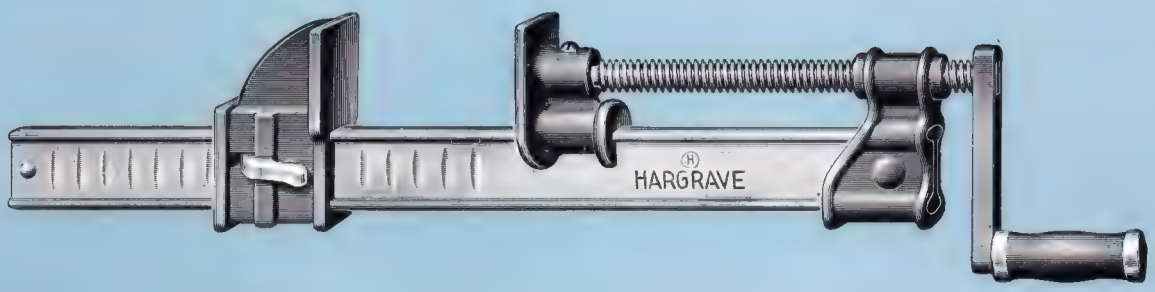
Opening Feet	List, Each	List Price, Single Doz. (6 pair)	Weight, Each
1	**$5.00**	**$60.00**	3 lbs.
1½	**5.15**	**61.80**	3½ lbs.
2	**5.30**	**63.60**	3¾ lbs.
2½	**5.45**	**65.40**	4¼ lbs.

Liberal Discount from List Prices

Hargrave Bar Clamps are designed to give years of dependable service. However, an occasional drop of oil on the screw and in the tip will greatly increase the life of the clamp. See suggestions for clamp care on page 4.

HARGRAVE
Tested Tools
THE CINCINNATI TOOL COMPANY

Improved "I" Bar Clamp No. 640

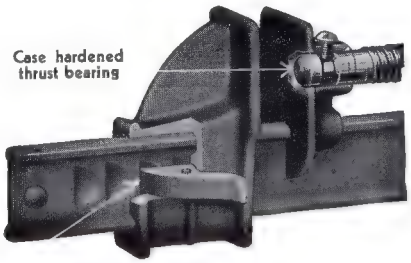


No other Clamp has this Patented Locking Device

It affords a positive stop—cannot bind or slip, yet releases readily.

Heavy, tempered steel dog bears against body of slide — nothing to break or wear out. No clamping pressure on pin.

Case - hardened thrust bearing in tip, centers the screw and practically eliminates wear at this point.



SPECIAL HANDLES

No. 19 Swivel Lever Handle

No. 18 All-Metal "T" Handle

The No. 18 Metal "T" Handle can be furnished without extra charge if specified. No. 19 Lever Handle can be furnished special. Ask for price when required.

No. 640 is a rapid, powerful clamp designed and constructed for the hard, everyday grind of production work.

CONSTRUCTION FEATURES

⅝ x 1½ x ⅛-inch web. Shaped to stand the greatest strain for the weight. Wide, smooth flange will not mar the work.

Formed in web, leaving the bar full strength as no metal is removed. Spaced ½-inch apart. Quick action, with no slipping. This is a Patented Feature.

Malleable iron. Cannot slip or bind. Always easily released. Heavy, tempered steel dog engages the notches, making a positive stop, and insuring years of service without repairs. See sectional view on left. Clamping surfaces, 1⅞ inches wide, 1 13/16 inches deep.

Malleable iron. Has case-hardened thrust bearing for end of screw, practically eliminating wear. Long yoke prevents binding on bar when clamping thin stock.

Steel, ⅝-inch diameter, with deep-cut "Acme" thread. Heat treatment prevents bending of screw and battering of thread.

Steel, with wood grip reinforced with heavy steel ferrule and cap to prevent breaking. (All Metal "T" Handle or Swivel Lever Handle optional. See illustrations.)

No. 640

Opening, feet	2	2½	3	4	5	6	7
No. 640, each	$ 5.45	$ 5.60	$ 5.75	$ 6.45	$ 7.25	$ 7.90	$ 8.60
Single dozen (6 pair)	65.40	67.20	69.00	77.40	87.00	94.80	103.20
Weight, lbs., each	6¾	7⅜	8	9¼	10½	11¾	13

Liberal Discount from all List Prices

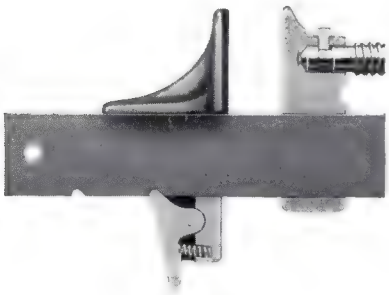
HARGRAVE
Tested Tools
THE CINCINNATI TOOL COMPANY

Perfection Clamps Nos. 440-450

This is a strong, durable, convenient, general purpose clamp. It is especially useful in all wide clamping, such as sash, doors, blinds, furniture, etc. It is made in two patterns—the regular and heavy. The regular pattern has clamping surfaces 2 inches deep, 1⅞ inches wide; screw is ⅝-inch in diameter. The clamping surfaces of the heavy pattern are 2¼ x 2¼ inches; screw is ¾-inch in diameter.

POSITIVE LOCK RELEASES EASILY

Steel dog rests in socket in slide. This prevents the rivet from taking any clamping strain. Practically unbreakable.



OPTIONAL HANDLES

No. 18, All-metal "T" Handle or No. 19 Swivel Lever Handle can be supplied on No. 440. See illustration on opposite page.

STURDILY CONSTRUCTED FOR LONG, SATISFACTORY SERVICE

The bar is high carbon manganese steel, giving great strength. Frame, tip and slide are of the best grade of malleable iron. Dog for slide is tempered steel. Tip has case hardened bearing to take end thrust of screw. Crank is steel and has wood grip reinforced with heavy steel cap and ferrule.

Screw is heat-treated, with deep cut "Acme" thread and extra long bearing, insuring long life to the clamp.

No. 440

Regular Pattern, ¼ x 1½-inch Bar

Opening, Feet	List, Each	List Price Single Doz. (6 Pair)	Weight, Each
2	$5.45	$65.40	6 lbs.
2½	5.60	67.20	6¾ lbs.
3	5.75	69.00	7¼ lbs.
4	6.45	77.40	8½ lbs.
5	7.25	87.00	9¾ lbs.
6	7.90	94.80	11 lbs.

No. 450

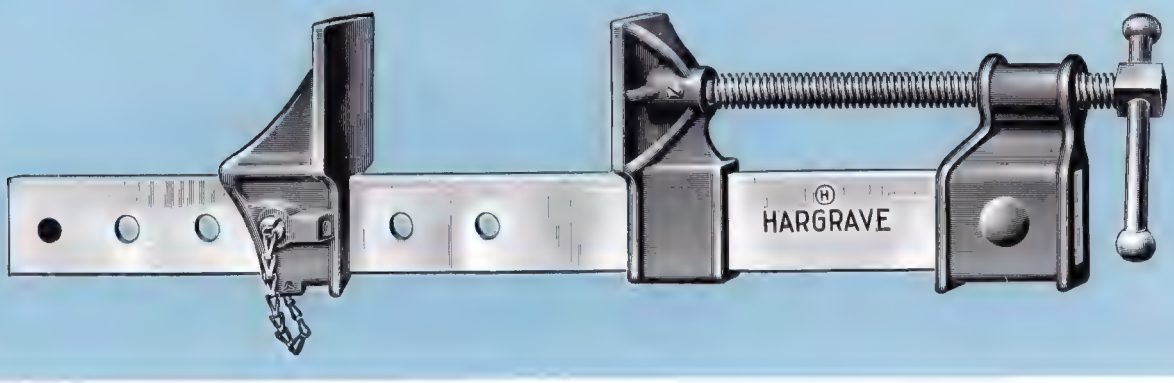
Heavy Pattern, ⅜ x 1¾-inch Bar

Opening, Feet	List, Each	List Price, Single Doz. (6 Pair)	Weight, Each
3	$12.20	$146.40	13⅝ lbs.
4	12.60	151.20	15¾ lbs.
5	13.30	159.60	17¾ lbs.
6	14.00	168.00	19¾ lbs.
7	15.00	180.00	21¾ lbs.
8	16.00	192.00	23¾ lbs.
10	20.60	247.20	27¾ lbs.

Liberal Discount from all List Prices

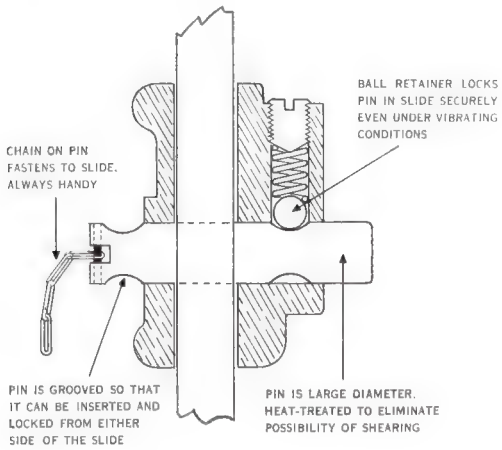
HARGRAVE
Tested Tools
THE CINCINNATI TOOL COMPANY

Heavy Duty Bar Clamp No. 750



Designed especially for the heaviest type of work such as truck and trailer body work, tank construction and other heavy steel fabrication. Please check **weights** and dimensions carefully before ordering.

Cross section through center of Bar and Slide shows important locking features.



BAR—Made of an extremely stiff, high-carbon steel. Holes are spaced 2½″ on centers.

FRAME—High-grade malleable iron reinforced at points of greatest stress. Bearing surface is 2½″ long.

TIP—Case hardened steel insert in tip takes end thrust of screw and insures long clamp life. Tip is high-grade malleable.

SLIDE—High tensile malleable iron reinforced where extra strength is needed. Will not stick when pressure is released.

Specifications

Bar Size, ⅝″ x 2½″. **Clamping Surfaces, 3″ x 4″.**

Screw Diameter 1″, Acme Thread.

No. 750 Heavy Bar Clamp

Opening, Feet	3	4	5	6	7	8	10	12
List, each	**$30.00**	**$30.00**	**$32.00**	**$34.00**	**$36.00**	**$38.00**	**$42.00**	**$46.00**
Weight, Pounds, Each	34	39	44	49	54	59	69	79

CAUTION: Check specifications carefully before ordering as this is the strongest and heaviest bar clamp on the market.

HARGRAVE QUICK CLAMPS
SPEED PRODUCTION

Patterns designed especially for woodworking and metalworking industries

√ Can be applied QUICKLY, released QUICKLY

Speeds production by instant adjustment to the work and instant release when job is finished.

√ Adaptable to greater variety of work

Especially useful in pattern making, foundry work, metal work, boat and shipbuilding, automobile body, airplane and parlor frame work.

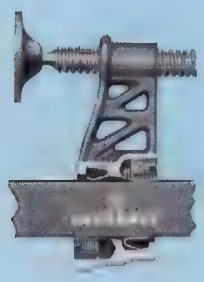
√ Rigid at any opening — no side twisting

Because clamp tip and bearing are always close together on the work, and frame of clamp is adjusted to thickness of stock being clamped. Hargrave Quick Clamps are rigid at any opening and side twist is eliminated.

√ Clutches insure positive locking

Block type and screw type clutches, illustrated below, insure positive locking even under vibrating conditions. These parts are specially hardened to give years of satisfactory service.

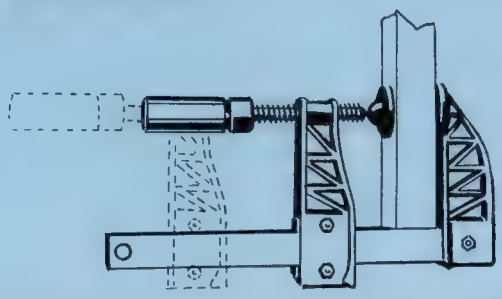
Positive locking action is insured by screw clutches and block clutches illustrated below.



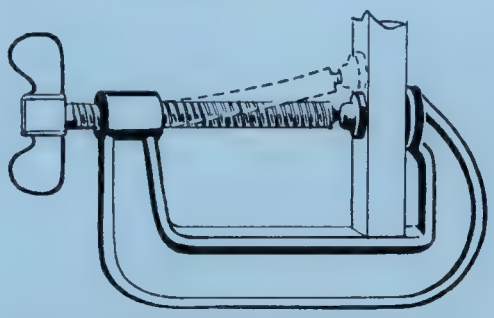
Cut-a-way view shows hardened screw type clutches which are used on Quick Clamp stock numbers 496, 498, 506 and 512. Screws are slotted so that a slight turn gives new gripping surfaces when the old ones become worn. (No. 496 which is the lightest pattern has one clutch screw on upper side. All others have 2 clutches.)

Block type clutches shown are steel, specially milled and hardened. They are designed especially for the heavier patterns of Quick Clamps when they must stand severe clamping strains for long periods of time.

Pressure surface and bearing are always close together on Quick Clamps, eliminating side twist and making them rigid at any opening.



Note how bearing and pressure tip of Quick Clamp slides down to work eliminating possibility of bent screws.

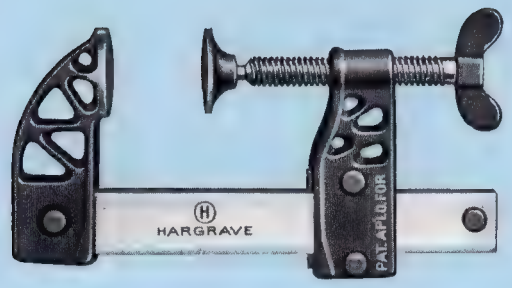


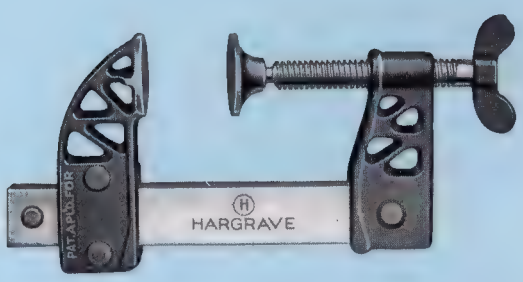
Screw of conventional "C" clamp is ruined when extreme pressure is applied on same thickness of work as above.

TURN PAGE FOR QUICK CLAMP SPECIFICATIONS

HARGRAVE
Tested Tools
THE CINCINNATI TOOL COMPANY

QUICK CLAMPS





DEPTH is distance from center of screw to bar

Nos. 498-500-514 Patterns
(Movable frame—Stationary foot)

No. 498

Bar, $\frac{5}{16}$ x 1-inch. Depth, 2 inches

Opening, Inches	List, Dozen	Approx. Wt., Dozen
4	$35.00	26¼ lbs.
6	35.00	28½ lbs.
8	36.00	30¾ lbs.
12	39.00	35¼ lbs.
18	43.50	42 lbs.
24	48.00	48¾ lbs.
30	52.00	55¼ lbs.

No. 500

Bar, ¼ x 1½-inch. Depth, 2½ inches

Opening, Inches	List, Dozen	Approx. Wt., Dozen
4	$44.00	40¾ lbs.
6	44.00	43½ lbs.
8	45.00	46¼ lbs.
12	48.00	51¾ lbs.
18	52.00	60 lbs.
24	56.00	68¼ lbs.
30	60.00	76½ lbs.
36	64.00	84¾ lbs.

No. 514

Especially designed for Heavy Work

Bar, ⅜ x 1¾-inch. Depth, 3 inches

Opening, Inches	List, Dozen	Approx. Wt., Dozen
6	$62.00	78½ lbs.
8	64.00	83 lbs.
12	68.00	92 lbs.
18	74.00	105½ lbs.
24	80.00	119 lbs.
36	92.00	146 lbs.
48	104.00	173 lbs.
60	116.00	200 lbs.

Nos. 499-501-503 Patterns
(Stationary frame—Movable foot)

No. 499

Bar, $\frac{5}{16}$ x 1-inch. Depth, 2 inches

Opening, Inches	List, Dozen	Approx. Wt., Dozen
4	$36.00	26¼ lbs.
6	36.00	28½ lbs.
8	37.00	30¾ lbs.
12	40.00	35¼ lbs.
18	45.00	42 lbs.
24	50.00	48¾ lbs.
30	54.00	55¼ lbs.

No. 501

Bar, ¼ x 1½-inch. Depth, 2½ inches

Opening, Inches	List, Dozen	Approx. Wt., Dozen
4	$45.00	40¾ lbs.
6	45.00	43½ lbs.
8	47.00	46¼ lbs.
12	50.00	51¾ lbs.
18	54.00	60 lbs.
24	58.00	68¼ lbs.
30	62.00	76½ lbs.
36	66.00	84¾ lbs.

No. 503

Bar, ⅜ by 1¾-inch. Depth, 4½ inches

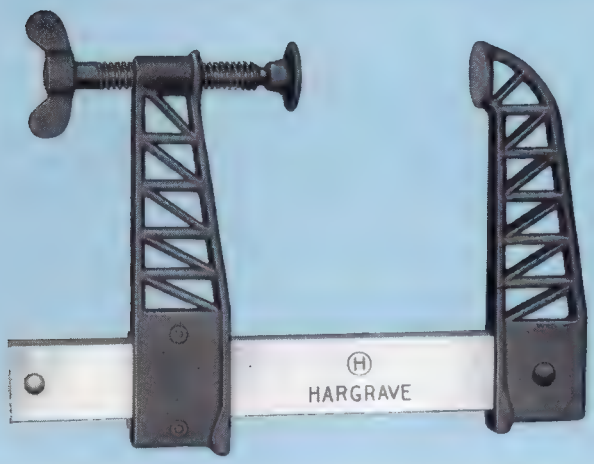
Opening, Inches	List, Dozen	Approx. Wt., Dozen
6	$62.00	70½ lbs.
8	64.00	75 lbs.
12	68.00	84 lbs.
18	74.00	97½ lbs.
24	80.00	111 lbs.
36	92.00	138 lbs.
48	104.00	165 lbs.

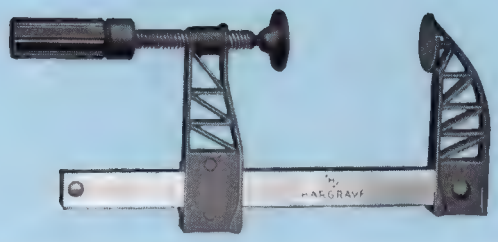
PACKED IN BULK

SEE CLUTCH DETAILS ON PRECEDING PAGE

HARGRAVE
Tested Tools
THE CINCINNATI TOOL COMPANY

QUICK CLAMPS





Nos. 502-508-510-512 Patterns
(Movable Frame, Stationary Foot)

Bar, ⅜ x 1¾-inch. Depth, 4½ inches

Opening, Inches	List, Dozen	Approx. Wt., Dozen
6	$62.00	70½ lbs.
8	64.00	75 lbs.
12	68.00	84 lbs.
18	74.00	97½ lbs.
24	80.00	111 lbs.
36	92.00	138 lbs.
48	104.00	165 lbs.
60	116.00	192 lbs.

Bar, ⅜ x 1¾-inch. Depth, 6 inches

Opening, Inches	List, Dozen	Approx. Wt., Dozen
6	$68.00	90 lbs.
8	70.00	95 lbs.
12	74.00	105 lbs.
18	80.00	119 lbs.
24	86.00	133 lbs.
36	98.00	147 lbs.

Bar, ½ x 2-inch. Depth, 9 inches

Opening, Inches	List, Dozen	Approx. Wt., Dozen
6	$110.00	180 lbs.
8	114.00	187 lbs.
12	122.00	201 lbs.
18	134.00	222 lbs.
24	146.00	243 lbs.

Bar, ¼ x 1½-inch. Depth, 4 inches

Opening, Inches	List, Dozen	Approx. Wt., Dozen
6	$54.00	47¼ lbs.
8	55.00	50 lbs.
12	57.00	55½ lbs.
18	60.00	63¾ lbs.
24	63.00	72 lbs.

Nos. 496-506 Patterns
(Movable Frame, Stationary Foot)
(Wood Handle)

Bar, ¼ x ¾-inch. Depth, 2½ inches

Opening, Inches	List, Dozen	Approx. Wt., Dozen
4	$32.00	12 lbs.
6	32.00	12¾ lbs.
8	33.00	13¼ lbs.
10	34.00	14¼ lbs.
12	35.00	17¾ lbs.
18	36.00	19 lbs.
24	39.00	24¾ lbs.
30	42.00	28 lbs.

Bar, $\frac{5}{16}$ x 1-inch. Depth, 3½ inches

Opening, Inches	List, Dozen	Approx. Wt., Dozen
6	$38.00	34 lbs.
8	39.00	36¼ lbs.
12	42.00	40¾ lbs.
18	46.00	46½ lbs.
24	50.00	52¼ lbs.
30	54.00	58 lbs.

Bars of Hargrave Quick Clamps are made of high carbon manganese steel, rolled from our special analysis. Frame and foot are the best grade of malleable. Screw is steel, heat-treated and has "Acme" thread, with long bearing, insuring long life. Gripping blocks are hardened steel.

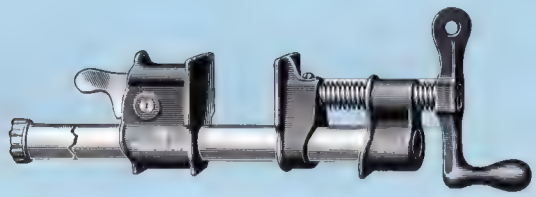
Can be instantly applied or removed from the work. Handier to operate, take up less room and save a great amount of time over ordinary clamps. Especially useful in pattern making, boat and ship building, aircraft construction and furniture manufacturing.

DEPTH is distance from center of screw to bar

SPECIAL CLUTCHES WILL NOT SLIP OR BIND

HARGRAVE
Tested Tools
THE CINCINNATI TOOL COMPANY

Clamp Fixture No. 600



For any length of ¾" pipe

No. 600 is the most popular Clamp Fixture. All parts are of best grade of malleable and finished in an attractive red baked-on enamel except the Screw which is steel and Cam which is hardened steel. It is easy to assemble on any odd length of pipe. We recommend black iron pipe, extra heavy for ordinary clamping and double extra when greater pressure is required. (Pipe not furnished.)

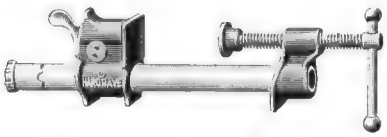
Slide will not slip under pressure and will not stick when pressure is released.

Clamping Surfaces . . . . . 1¾"x1¾"
Screw . . . . . "Acme" Thread, ⅝" Diameter
Cam . . . . . Hardened Steel, Milled Teeth

A SET of fixtures consists of irons complete to make ONE CLAMP (frame, screw, handle, tip and slide) without the pipe.

No. 600 List, dozen sets **$40.00**
Packaged—One set to a box. Weight, each, 2 lbs., 3 oz.

Clamp Fixture No. 620



For any length of ½" pipe

The Frame and Slide of No. 620 are made of best grade of malleable and finished in an attractive red baked-on enamel.

Frame is threaded to fit standard pipe thread. Steel screw is ½" diameter and has sliding pin handle. Steel oscillating ball and socket tip is $\frac{15}{16}$"—put on to stay. Slide has clamping surfaces 1½" x 1½". Hardened steel cam (trigger type) has milled teeth. Will not slip—released easily.

A "set" consists of all parts pictured above EXCEPT pipe.

No. 620 List, dozen sets **$29.00**
Packed—One set in a box. Weight, 1¼ lbs.

Pipe is not included with fixtures

Clamp Fixture No. 615

Fits Wood Bars measuring 1⅛"x2¼"

Frame, tip and slide are malleable; screw is steel, ½-inch diameter, with "Acme" thread; clamping surfaces of tip and slide are 1½ inches wide, 1$\frac{7}{16}$ inches high. (Furnished with either hand wheel or crank.)

A SET of Fixtures consists of irons complete to make ONE CLAMP (frame, screw, handle, tip and slide) without the wood bar.

No. 615 (with wheel handle)
List, dozen sets **$29.00**

No. 615—18½ (with crank)
List, dozen sets **$29.00**

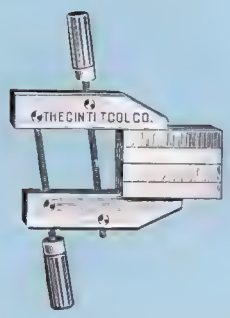
Packed in bulk. Weight, per dozen, 13¾ lbs.

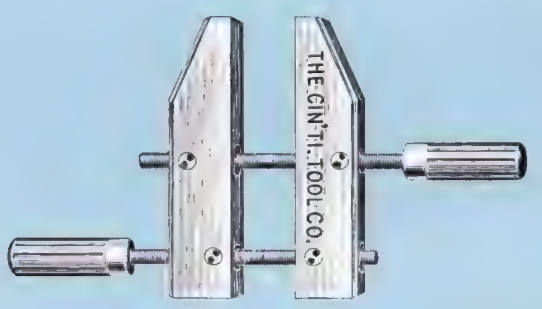
Bar is not included with fixtures

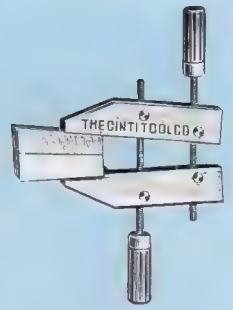
List Prices are Subject to Liberal Discount

HARGRAVE
Tested Tools
THE CINCINNATI TOOL COMPANY

Steel Spindle Hand Screws







Hargrave Hand Screws are conventional in size and proportion, but have refinements found in no other Hand Screws. The Jaws of specially selected Hard Maple are individually tested for strength and those that do not meet the rigid Hargrave production test are eliminated.

SPINDLES are of Cold-drawn steel. The use of "ACME THREAD" insures longer wear with less frictional resistance. BEARINGS are of a special analysis steel designed for trouble-free service. JAWS are selected Hard Maple, properly seasoned and oiled. HANDLES are fluted to give better grip under all conditions.

STOCK No.	**704**	**706**	**708**	**710**	**712**	**714**	**716**	**718**
Length of jaws, inches	4	6	8	10	12	14	16	18
Opening, inches	2	3	4½	6	8½	10	12	14
Depth of jaw to top screw in	3	4⅛	5¼	6	6 15/16	7 15/16	8⅞	9¼
List, dozen	**$30.00**	**$36.00**	**$42.00**	**$48.00**	**$54.00**	**$60.00**	**$72.00**	**$84.00**
Approximate weight, lbs., dozen	5	14	28	36	58	72	96	103

NON-ADJUSTABLE PATTERN (opening and closing the jaws parallel) can also be furnished.

PACKING—Sizes 4, 6, 8, 10 and 12 inches—½ dozen to a carton. Sizes 14, 16 and 18 inches, ⅓ dozen to a carton.

Please Order Package Lots

Press Screws Nos. 36T 36-W

Nos. 36-T and 36-W Press Screws are for use in connection with Clamping Jigs.

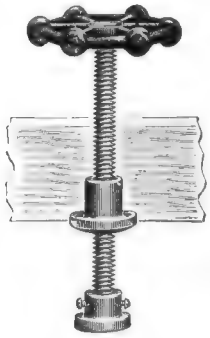
STEEL SCREW is ⅝-inch diameter and has 6-inch travel. Thread is "USS". TIP is 1¼ inches in diameter. THREADED NUT drives in a 1-inch hole and can be held firmly by 2 screws.

No. 36-T or 36-W List, dozen	**$22.00**
Screw and Handle, List, each	1.00
Nut, List, each	.65
Tip, List, each	.65
Weight, per dozen	13¾ lbs.

Packed in bulk.

Ask for prices on longer length screws.

No. 36-T

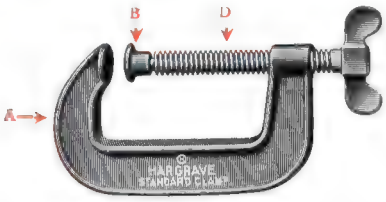


No. 36-W

List Prices Subject to Liberal Discount

REPAIR PARTS FOR CLAMPS

IMPORTANT—When ordering parts specify catalog STOCK NUMBER and size of clamp; also give LETTER designating part needed as indicated below.



Letters indicated below apply to all "C" Clamps and No. 574 Rigid Deep Clamp.

A—Frame B—Tip D—Screw and Wing

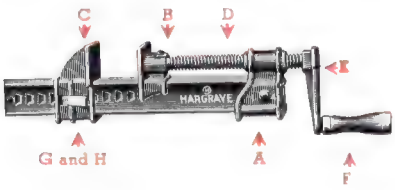
Stock Numbers or Size	Screw and Handle Part "D"	Tip Part "B"
50-P Super Junior	$0.08 Each	$0.03 Each
51-P " "	.08 "	.03 "
52-P " "	.09 "	.03 "
53-P " "	.10 "	.03 "
54-P " "	.13 "	.04 "
55-P " "	.22 "	.06 "
56-P " "	.19 "	.06 "
551 Junior Clamp	.50 "	.10 "
552 " "	.60 "	.10 "
555 " "	.14 "	.03 "
556 " "	.30 "	.03 "
566 Aircraft Clamp	.14 "	.03 "
568 " "	.22 "	.04 "
540 Standard Clamp (also No. 530)		
3"	.54 "	.10 "
4"	.60 "	.16 "
5"	.70 "	.18 "
6"	.80 "	.18 "
8"	1.10 "	.20 "
10"	1.70 "	.30 "
12"	2.00 "	.30 "
14"	2.40 "	.30 "
603 Body Clamp		
3"	.54 "	.16 "
4"	.60 "	.18 "
5"	.70 "	.18 "
6"	.80 "	.20 "
8"	1.10 "	.30 "
10"	1.70 "	.30 "
12"	2.00 "	.30 "

Stock Numbers or Size	Screw and Handle Part "D"	Tip Part "B"
573 Deep Clamp		
3½"	$0.55 Each	$0.16 Each
4½"	.65 "	.18 "
6½"	.80 "	.18 "
40 Superclamp—See listing, page 9.		
41 Welders' Clamp		
2"	.90 "	.10 "
3"	1.45 "	.10 "
4"	1.75 "	.16 "
6"	3.20 "	.18 "
42 Superclamp		
4"	1.75 "	.30 "
6"	1.75 "	.30 "
8"	1.75 "	.30 "
10"	1.75 "	.30 "
12"	1.75 "	.30 "
15"	3.20 "	.30 "
18"	4.10 "	.30 "
43 Welders' Clamp		
4"	3.55 "	.30 "
6"	4.00 "	.30 "
8"	7.50 "	.30 "
10"	12.45 "	.30 "
12"	12.45 "	.30 "
44 Superclamp		
2"	.50 "	.10 "
3"	.54 "	.10 "
4"	.60 "	.16 "
6"	.80 "	.18 "
8"	1.10 "	.20 "
10"	1.70 "	.30 "
12"	2.00 "	.30 "
44X Superclamp		
6" x 8"	.75 "	.18 "
8" x 12"	1.10 "	.20 "
12" x 16"	1.95 "	.30 "
45 Welders' Clamp		
2"	1.10 "	.10 "
3"	1.70 "	.16 "
4"	2.00 "	.18 "

574 Deep Clamp

	Frame with Screw and Tip	Foot	Screw and Wing	Tip
6" x 9"	$3.35	$2.25	$0.90	$0.30
8" x 9"	3.80	2.25	1.15	.30
12" x 9"	4.50	2.25	2.00	.30
16" x 9"	5.80	2.25	3.40	.30

NOTE—Size of Clamp and Stock Number Are Necessary When Ordering "C" Clamp Parts



These letters apply to **Stock Numbers 640-650-440-450-458-750.**

A—Frame with Rivet.
B—Tip.
C—Slide complete with Dog and Spring.
D—Screw and Crank complete.
E—Crank only.
F—Wood Handle.
G—Dog (trigger) with Rivet.
H—Spring for Dog.

BAR CLAMPS

		Perf. No. 440	Perf. No. 450	Joiner No. 458
Frame	(A)	$0.70	$2.25	$1.25
Tip	(B)	1.25	2.35	.60
Slide Complete	(C)	1.10	2.25	1.10
Screw and Handle	(D)	1.25	2.25	1.00
Crank only	(E)	.50	.90	.35
Dog	(G)	.20	.50	.20
Spring only	(H)	.05	.06	.05
Rivets		.05	.05	.02
Grip (Wood)	(F)	.25	.25	
Tee Handle only		.40		

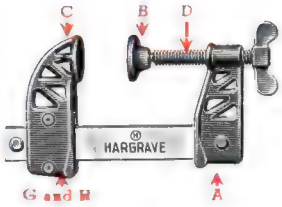
BAR CLAMPS

		I-Bar No. 640	I-Bar No. 650	Heavy No. 750
Frame	(A)	$0.90	$2.45	$4.50
Tip	(B)	1.10	4.40	5.60
Slide Complete	(C)	1.75	4.40	*11.20
Screw and Handle	(D)	1.25	2.25	3.40
Crank only	(E)	.50	.90	
Dog	(G)	.25	.25	
Spring only	(H)	.05	.05	
Rivets		.05	.05	
Grip	(F)	.25	.25	
Tee Handle only		.40		

*Includes Pin—Pin only, $2.25.

REPAIR PARTS FOR CLAMPS

IMPORTANT—In ordering parts specify catalog STOCK NUMBER and size of Clamps; also give LETTER designating the part needed, as indicated below.



QUICK CLAMPS (odd numbers)

Stationary frame—Movable foot

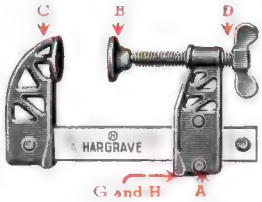
QUICK CLAMPS		No.499	No.501	No.503
Frame Complete	(A)	$0.90	$1.15	$2.25
Foot	(C)	1.40	1.50	2.25
Screw and Wing	(D)	.35	.45	.90
Tip	(B)	.30	.20	.30
Clutch Assembly	(G)	.45	.45	.50
Spring	(H)	.05	.05	.10

These letters apply to **Stock Numbers 499, 501 and 503** (Odd numbers).

A—Frame, complete with Screw, Wing, Tip.
B—Tip only.
C—Slide, Clutch Block and Springs.
D—Screw and Wing.
G—Insert complete (Clutch Block and Spring).
H—Spring for Clutch.

QUICK CLAMPS (even numbers)

Movable frame—Stationary foot



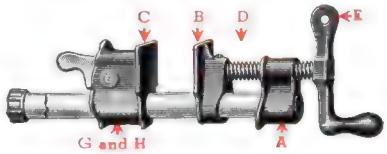
QUICK CLAMPS		No.496	No.498	No.500	No.502	No.506
Frame Complete	(A)	$1.10	$1.75	$2.00	$3.10	$1.75
Foot	(C)	.65	.70	.80	1.60	.80
Tip	(B)	.07	.30	.20	.30	.30
Screw and Wing	(D)	.35	.35	.45	.90	.40
Clutch or Grip	(G)	.05	.08	.45	.50	.08
Spring	(H)	.05	.05	.05	.10	.05

QUICK CLAMPS		No.508	No.510	No.512	No.514
Frame Complete	(A)	$2.80	$5.00	$1.75	$3.50
Foot	(C)	1.75	3.20	1.50	1.60
Tip	(B)	.20	.30	.30	.30
Screw and Wing	(D)	1.00	1.40	.45	.90
Clutch or Grip	(G)	.50	1.00	.08	.50
Spring	(H)	.10	.12	.08	.10

These letters apply to **Stock Numbers 496-498-500-502-506-508-510-512-514.** (Even numbers.)

A—Frame, complete with Screw, Wing, Tip, Clutch Blocks and Springs.
B—Tip only.
C—Foot.
D—Screw and Wing.
G—Clutch Block or Clutch Screw Assembly.
H—Spring for Clutch.

CLAMP FIXTURES (Pipe and Wood Bar)

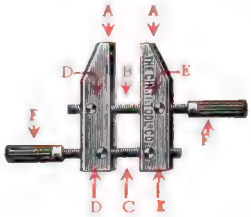


STOCK NUMBERS		No. 600	No. 620	No. 615
Frame	(A)	$0.60	$0.55	$1.10
Tip	(B)	.60	.09	.45
Slide Complete	(C)	1.25	1.15	.80
Screw and Handle	(D)	.80	.55	.70
Handle only	(E)	.50		.35
Cam (Trigger)	(G)	.22	.22	
Spring	(H)	.03	.05	
Pin		.12	.12	

These letters apply to **Stock Numbers 600-620-615.**

A—Frame. B—Tip.
C—Slide complete with cam and spring.
D—Screw and Crank.
E—Crank only.
G—Cam only. H—Spring for Cam.

HAND SCREWS

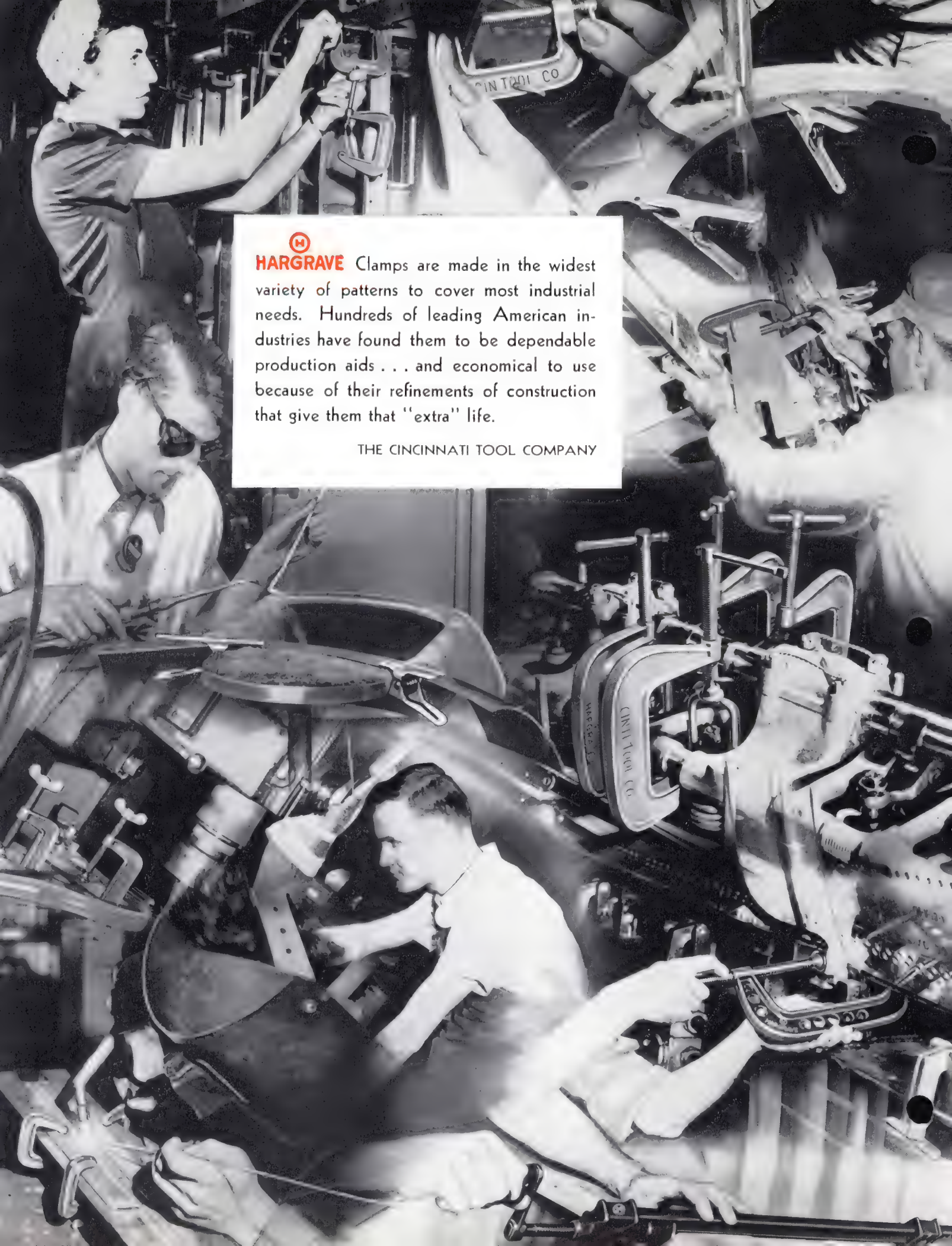


HAND SCREWS		No.704	No.706	No.708	No.710
Jaw	(A)	$0.20	$0.45	$0.60	$0.80
Center Screw	(B)	.12	.25	.25	.30
End Screw	(C)	.12	.25	.25	.30
Nut	(D or E)	.08	.12	.12	.12
Handle only	(F)	.10	.20	.20	.20

HAND SCREWS		No.712	No.714	No.716	No.718
Jaw	(A)	$1.10	$1.40	$1.60	$1.90
Center Screw	(B)	.40	.50	.60	.70
End Screw	(C)	.40	.50	.60	.70
Nut	(D or E)	.20	.20	.20	.20
Handle only	(F)	.20	.20	.25	.25

These letters apply to **Hand Screws.**

A—Wood Jaw.
B—Upper or Middle Screw.
C—Lower or Outer Screw.
D—Nut, right-hand thread.
E—Nut, left-hand thread.
F—Handle.



HARGRAVE Clamps are made in the widest variety of patterns to cover most industrial needs. Hundreds of leading American industries have found them to be dependable production aids . . . and economical to use because of their refinements of construction that give them that "extra" life.

THE CINCINNATI TOOL COMPANY

CHISELS

HARGRAVE Tested Tools
THE CINCINNATI TOOL COMPANY

ALLOY STEEL (Individually Tested) FORGINGS

COLD CHISEL No. 200

(Size steel is same as width of blade)

Size, Inches	Length, Inches	List per Dozen
1/4	5	4.70
5/16	5	5.00
3/8	5	5.60
1/2	6	6.50
5/8	6 1/2	7.80
3/4	7 1/2	10.30
7/8	8	12.40
1	8 1/2	15.60

No. 205 Extra Long Cold Chisel

Size, Inches	List, Doz.
1/2 x 10	7.80
1/2 x 12	8.40
5/8 x 12	10.00
3/4 x 12	11.50
7/8 x 12	15.50
1 x 12	18.50
3/4 x 18	15.50
7/8 x 18	19.00
1 x 18	24.00
1 1/4 x 18	36.00
3/4 x 24	20.00
7/8 x 24	24.00
1 x 24	31.00
1 1/4 x 24	44.00
1 1/2 x 24	75.00
1 1/4 x 36	60.50
1 1/2 x 36	99.50

No. 223—Cape
No. 233—Half-Round
No. 243—Diamond Pt.
No. 253—Rd. Nose Chisel

P'nt. St'k. L'gth.	List, Doz.
1/8 x 5/16 x 4 1/2	6.50
3/16 x 3/8 x 5	7.50
1/4 x 1/2 x 6 1/2	8.40
5/16 x 5/8 x 7	9.30
3/8 x 5/8 x 7 1/2	10.30
1/2 x 3/4 x 8	11.70
5/8 x 3/4 x 8	12.30
3/4 x 7/8 x 8 1/2	14.00
7/8 x 1 x 9	18.70

No. 577—All-Steel Wood Chisel

P'nt. St'k. L'gth.	List, Doz.
1/2 x 1/2 x 10	14.50
3/4 x 5/8 x 12	16.00
1 x 5/8 x 12	17.00
1 1/4 x 3/4 x 12	18.00

WRECKING CHISELS

No. 582—Straight Wrecking chisel

1 1/2 x 3/4 x 18 ..... **22.50**

No. 583—Bent Wrecking Chisel

1 1/2 x 3/4 x 18 ..... **25.00**

No. 950—Floor Chisel

2 1/2 x 5/8 x 11 ..... **26.00**
3 x 5/8 x 12 ..... **30.00**

No. 941—Flat Brick Chisel

1 1/8 x 7/8 x 3/8 stock x 12 ..... **14.00**

No. 944—Octagon Brick Chisel

1 x 5/8 x 12 ..... **14.00**
1 x 5/8 x 18 ..... **16.00**
1 1/4 x 3/4 x 24 ..... **22.00**

No. 962—Tile Chisel

1/4 x 5 ..... **5.60**

No. 963—Plugging Chisel

3/16 x 1/2 x 10 ..... **11.00**
1/4 x 5/8 x 10 ..... **12.00**

HARGRAVE Tested Tools
THE CINCINNATI TOOL COMPANY

PUNCHES

PUNCHES

No. 263—Solid Punch

P'nt. St'k. L'gth.	List, Doz.
1/16 x 1/4 x 4	5.00
1/8 x 5/16 x 4 1/2	5.00
5/32 x 3/8 x 5	5.00
3/16 x 3/8 x 5 1/2	5.60
1/4 x 1/2 x 6	6.00
5/16 x 1/2 x 6 1/2	6.40
3/8 x 5/8 x 7	7.70
1/2 x 5/8 x 8	8.40

No. 630—Drift Punch

3/16 x 5/8 x 10 (Taper 5 1/4)	10.00
1/4 x 5/8 x 10 (Taper 4 3/4)	10.00
5/16 x 5/8 x 10 (Taper 4 3/4)	10.00
3/8 x 3/4 x 10 (Taper 5)	11.50

No. 620—Lining-Up Punch

5/32 x 1/2 x 10 (Taper 6 1/2)	10.00
3/16 x 5/8 x 12 (Taper 8 1/2)	11.50
1/4 x 5/8 x 12 (Taper 8 1/2)	11.50
5/16 x 3/4 x 12 (Taper 8 1/2)	13.00
1/4 x 3/4 x 18 (Taper 9 1/2)	16.00

No. 284—Center Punch

(Order by Stock Size)

Size of steel, inches	
1/4 x 3 1/2 (Dia. of P'nt. 1/8)	4.20
3/8 x 5 (Dia. of P'nt. 3/16)	5.10
1/2 x 6 (Dia. of P'nt. 5/16)	6.00
5/8 x 7 (Dia. of P'nt. 3/8)	8.80

No. 2873—Prick Punch

1/4 x 3 1/2	4.20
3/8 x 5 1/2	5.10
1/2 x 6	6.00

No. 2864—4" Pin Punch

P'nt. St'k. L'gth.	List, Doz.
1/16 x 5/16 x 4	4.80
3/32 x 5/16 x 4	4.80
1/8 x 5/16 x 4	4.80
5/32 x 5/16 x 4	4.80
3/16 x 5/16 x 4	4.80

No. 2866—6" Pin Punch

3/32 x 3/8 x 6	6.00
1/8 x 3/8 x 6	6.00
5/32 x 3/8 x 6	6.00
3/16 x 3/8 x 6	6.00
7/32 x 3/8 x 6	6.00
1/4 x 3/8 x 6	6.00

No. 2869—9" Pin Punch

1/8 x 1/2 x 9	10.00
3/16 x 1/2 x 9	10.00
1/4 x 1/2 x 9	10.00
5/16 x 1/2 x 9	10.00
3/8 x 1/2 x 9	10.00

No. 580—Rivet Buster

Size, In.	List, Doz.
1/2 x 3/4 x 9	13.00
5/8 x 7/8 x 12	15.50
3/4 x 1 x 18	34.00

BULL (STONE) POINT

No. 584

Size, In.	List, Doz.
3/4 x 9	10.80
3/4 x 12	11.50
7/8 x 12	15.50
1 x 12	18.50
1 x 15	21.60
7/8 x 18	19.00
1 x 18	24.00
1 1/8 x 18	32.50
1 1/4 x 18	36.00
1 x 24	31.00
1 1/8 24	40.00
1 1/4 x 24	44.00
1 1/2 x 24	75.00
1 1/4 x 36	60.50
1 1/2 x 36	99.50

ALLOY STEEL (Individually Tested) FORGINGS

The designs of Hargrave Individually Tested Forgings have been carefully worked out with the aid of mechanics who use such tools. You will find them all properly balanced and proportioned. The ALLOY STEEL from which these tools are forged is rolled from OUR SPECIAL ANALYSIS, having been developed over a period of years. They are TRIP-HAMMER FORGED (not drop forged) and individually tested.

We also manufacture Star Drills for Hand and Power Hammer use, File Cleaners, Metal and Washer Cutters, Saw Vises and Brace Wrenches.

WRITE FOR DESCRIPTIVE MATTER IF INTERESTED

HARGRAVE
Tested Tools
THE CINCINNATI TOOL COMPANY

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NOTE: Prices shown in this catalog are list and they are subject to liberal discounts. Discounts gladly furnished on request.

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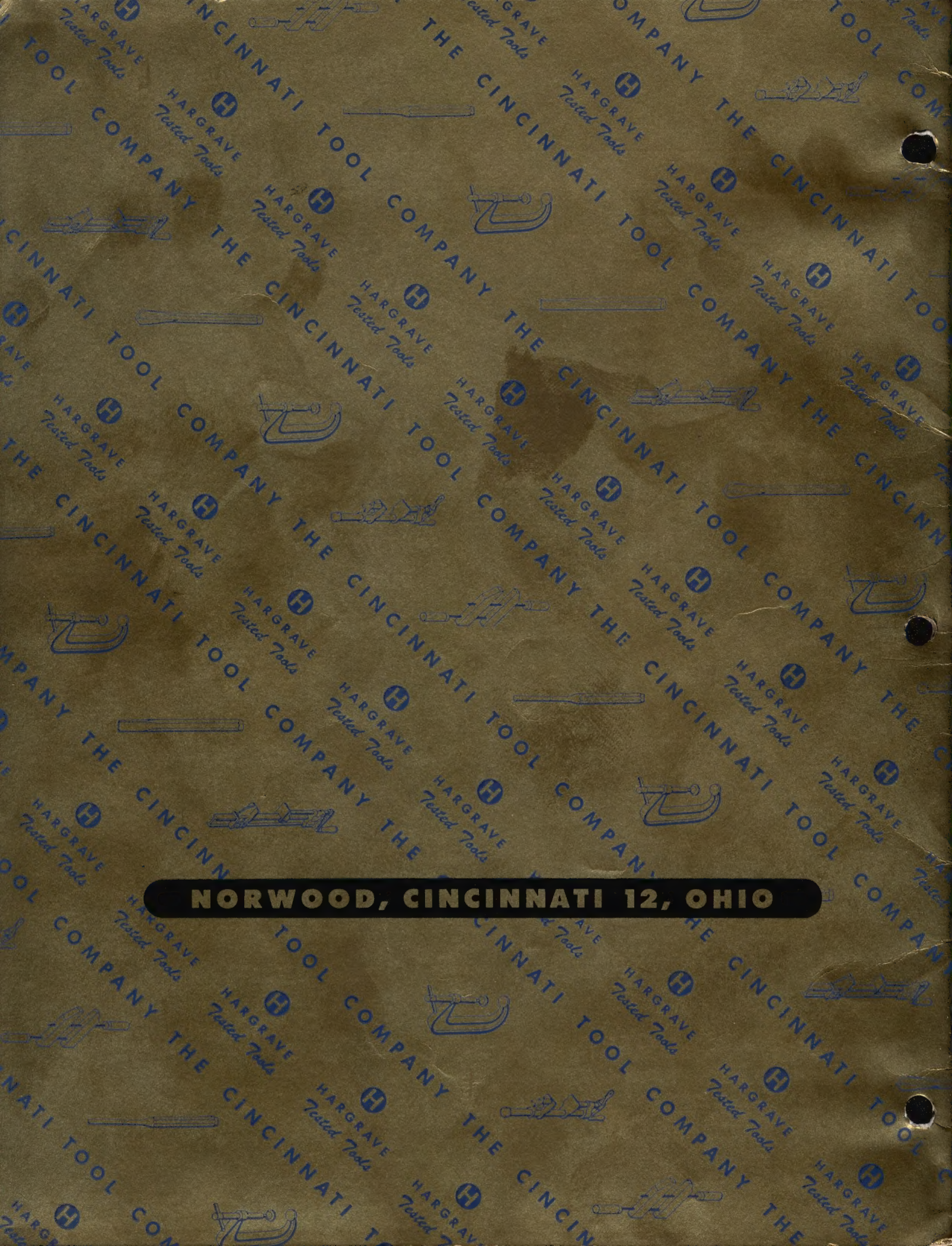
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